PODZEY, Anatoliy Vladimirovich; SULIMA, Andrey Mikhaylovich; FIRAGO, Valentin Petrovich; TSUKANOV, Ivan Semenovich; KUINDZHI, A.A., inzhener, retsenzent; STANKEVICH, V.G., inzhener, redaktor; BELITSKAYA, A.M., redaktor; SHCHERBAKOV, P.V., tekhnicheskiy redaktor

[Technology of building aviation engines; the processing of principal parts and units] Tekhnologiia aviadvigatelestroeniia; obrabotka osnovnykh detalei i uzlov. Pod red. A.V. Podzeia. Moskva, Gos. izd-vo obor. promyshl., 1957. 415 p. (MLRA 10:5)
(Airplanes--Engines)

SOV-129-58-6-5/17

AUTHORS: Kishkin, S. T. (Dr.Tech.Sci.Prof.), Klypin, A. A. and Sulima, A. M. (Cands.Tech.Sci.)

TITLE: Influence of the Plastic Deformation on the High Temperature Strength of the Alloy EI437 (Vliyaniye plasticheskoy deformatsii na zharoprochnost' splava EI437)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 6, pp 18-21 (USSR)

ABSTRACT: The aim of the here-described work was to study the properties of the alloy EI437 after preliminary plastic deformation and to establish the mechanism of failure of this alloy at 500, 700 and 800°C. The technique and the results are described. The authors arrived at the following conclusions: (1) The plastic deformation has an important influence on the service life of dispersion hardened high temperature alloys of the type EI437, reducing the service life considerably at 700 to 800°C. (2) The influence of plastic deformation is linked with an acceleration of the diffusion processes which form the basis of dispersion hardening and which lead to a decrease in the breaking strength; at low temperatures when there is no appreciable acceleration of the diffusion processes, the factor of breaking up of the grains of the metal into blocks pre-

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SULIMA, A.M.; YEVSTIGNEYEV, M.I.; TRUSOV, V.M.

The VIU-1 MAI-VIAM high-power high-frequency unit used for endurance and vibration tests of parts and units of jet engines and aircraft materials. Nauch. dokl. vys. shkoly; mash. i prib. no.2:110-119 '59. (MIRA 12:12)
(Testing machines)
(Airplanes--Turbojet engines--Testing)

25967

10 7400 also 2206, 2808

S/535/60/000/129/005/006
E193/580

AUTHORS: Sulima, A.M., Yevstigneyev, M.I., Zhukov, S.L., Candidates of Technical Sciences, Shadskiy, I.A. and Zhukov, N.D., Engineers

TITLE: Investigation of endurance of titanium-base and other heat-resistant alloys tested on the ВИУ-1 МАИ-ВИАМ (VIU-1 MAI-VIAM) machine under high frequency loads

PERIODICAL: Moscow. Aviatsionnyy institut. Trudy, No.129, 1960. Issledovaniye fizikomekhanicheskikh i ekspluatatsionnykh svoystv detaley posle obrabotki, pp. 92-111

TEXT: The object of the investigation described in the present paper was to determine the endurance limit of a titanium alloy ВТ3-1 (VT3-1) and two nickel-base alloys of the ЭИ617 (EI617) and ЖС6К (ZhS6K) type, and to study the effect of the frequency of alternating loads on this property. The main shortcoming of the conventional fatigue testing methods is that the test conditions bear little relation to the conditions obtaining in service; in addition, they are time-consuming, 4-5 months of continuous work being required to construct on fatigue curve. It was for these reasons that a high frequency testing machine (VIU-1 MAI-VIAM) was

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X

used in the present investigation. The machine (whose detailed description is given) is of the resonance type and was designed for single-plane bending fatigue tests which can be carried out under the conditions of both imposed and resonance vibrations. The vibrations, generated by a powerful electromagnetic system consisting of an amplifier and a transformer, are transmitted to the test piece through a heavy beam, capable of producing alternating loads which are sufficiently high to break standard test pieces or even actual components, such as turbine blades. The auxiliary equipment consists of a microscope used for setting the test piece and for measuring the vibration amplitude which at high temperatures is measured with the aid of a cathetometer, and an electrical resistance furnace for high temperature work. Before testing, the test pieces were heat treated according to schedules given in Table 2. The tests were carried out on cylindrical test pieces of the cantilever type. The gauge length l of the test pieces varied depending on the load frequency and test temperature, and was calculated from the formula

$$l = \sqrt{\frac{(1.8751)^2}{2\pi f}} \sqrt{\frac{EJ}{m}}$$

where f is the vibration frequency per sec, E the modulus of elasticity (kg/mm^2), J the moment of inertia (mm^4), and m mass per unit length ($kg.sec^2/mm^2$). The tests were conducted on a base $N = 10^8$ cycles in the case of the EI617 and ZhS6K alloys, and 10^7 and 10^8 cycles in the case of the VT3-1 alloy. Each fatigue curve was constructed from data obtained on eight test pieces. In the first test of each series a stress equal approximately to $0.5\ \sigma_b$ was used, where σ_b is the U.T.S. of the alloy tested; in each subsequent test the applied stress was lowered by 2 kg/mm^2. The vibration amplitude, A (mm), of the free end of the test piece, required to produce a given stress, was calculated from the formula

$$A = 0.5682 \frac{l^2}{Ed} \sigma,$$

where l and d are the length and diameter of the specimen, respectively, E the modulus of elasticity (kg/mm^2), and σ_{-1} the applied stress (kg/mm^2). The results are reproduced in Figs.10-13, where the stress σ_{-1} (kg/mm^2) is plotted against the number of cycles to fracture. The fatigue curves in Fig.10 relate to alloy EI617, tested at 20°C under the following conditions:(1)testing

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machine of the ГЗИП(GZIP) type (bending of the revolving specimen), load frequency f = 50 cycles/sec; (2) testing machine of the П-391 (P-391) type (bending of a revolving specimen), f = 200 cycles/sec, (3) testing machine VIU-1 MAI-VIAm (single plane bending), f = 1000 cycles/sec. The fatigue curves in Fig.11 relate to alloy ZhS6K tested at 20°C, the testing conditions for curves 1-3 being the same as in Fig.10. The results, reproduced in Fig.12 relate to alloy VT3-1 tested under the following conditions: curve 1 - testing machine VIU-1 MAI-VIAM, f = 1100 cycles/sec, t = 20°C; curve 2 - same as for curve 1, except f = 420 cycles/sec; curve 3 - testing machine GZIP, f = 50 cycles/sec, t = 20°C; curve 4 - testing machine VIU-1 MAI-VIAM, f = 420 cycles/sec, t = 400°C. Fig.13 shows the fatigue curves of the VT3-1 alloy, tested at 20°C on the VIU-1 MAI-VIAM machine, curves 1-3 relating to tests carried out at f = 450, 1100 and 1650 cycles/sec, respectively; these are the most significant results of the present investigation, showing that the endurance limit of the alloys studied increased with increasing load frequency. Metallographic examination of the fatigue test pieces in the region of fracture revealed no changes in the microstructure

due to increased loading frequency. The fatigue cracks were trans-crystalline, and only in the zone of final fracture were intergranular cracking and some degree of plastic deformation of the grains observed. It was concluded that both the equipment used and the method employed by the present authors are suitable for fatigue testing under high frequency loading and give reliable results which can be used as design data in the production of turbine and compressor blades, operating under high frequency loads. There are 15 figures, 5 tables and 6 references: 1 Soviet and 5 English. The English-language references read as follows: Lomas T., Ward I., Rait, I., Colbeck E., International Conference on Fatigue of Metals, London, Sept., 1956; Krouse G., Proc. ASTM, 34, 1934, II, 156; Jenkin C. and Lehman G., Proc. Roy. Soc., 125, 1929, 83; Wade A and Grootenhuis P., International Conference on Fatigue of Metals, London, Sept., 1956.

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S/535/61/000/140/005/006
D240/D304

10.8100 4016 1413

AUTHORS: Sulima, A.M., Candidate of Technical Sciences, Yevstigneyev, M.I. and Rakhmarova, M.S.

TITLE: Investigating the effect of technological factors on the endurance of retractory alloys in high-frequency loading

SOURCE: Moscow. Aviatsionnyy institut. Trudy, no. 140. Tekhnologicheskiye metody povysheniya kachestva detaley i uzlov aviadvigateley. 1961, 71-112

TEXT: The authors deal with investigating the effect of 7 different methods of treatment on the durable strength of the alloys ЭИ617 (EI617) and ЭИ867 (EI867). The methods are: Milling with subsequent polishing; milling with subsequent grinding; mechanical polishing preceded by grinding and milling; electro-polishing preceded by mechanical polishing, grinding and milling, etc. A detailed description of the methods of treatment employed is given, with numerical data, such as the size of the cutter, velocity etc. [Abstracter's note: The specimens

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are described as "plane and rectangular" in the text but their actual shape is as in Fig. 14]. All tests were carried out on an electrodynamical vibrator which is described in detail. For heating specimens, in the process of testing, a special high-temperature resistance furnace was used which is also described. Thermal calibration of the specimens was made before testing. After the mechanical treatment, the depth of work hardening and the residual stresses were determined; the former by an X-ray method and the latter by N.N. Davidenkov's method; details of the results are given. The specimens were tested for endurance on bending, with the frequency of resonance vibrations of the order of 850-1000 cycles, at 850°C. Graphs of the results are given. It was found that the endurance depends on the method of treatment and is increased by finishing methods which reduce the residual tensile stresses and the depth of work hardening. The authors recommend electric and mechanical polishing. Thermal treatment also increases the limit of durable strength. There are 26 figures, 5 tables and 15 Soviet-bloc references.

L 45814-65 EWT(d)/EWT(m)/EWP(w)/EPF(c)/EWP(c)/EWA(d)/EWP(v)/EWP(j)/T/EWP(t)/
EWP(k)/EPA(bb)-2/EWP(b)/EWP(l)/EWA(h)/EWA(c)/EWP(1)/EPF(n)-2 Pc-4/Pf-4/Pr-4/Peb/
ACCESSION NR AM5002547 BOOK EXPLOITATION Pu-4 JD/HW/EM/RM S/

Yevstigneyev, M. I. (Docent); Morozov, I. A. (Docent); Podzey, A. V. (Professor, Doctor of Technical Sciences); Sulima, A. M. (Docent); TSukanov, I. S. (Docent)

Production of basic parts and units of aircraft engines (Izgotovleniye osnovnykh detaley i uzlov aviadvigateley), Moscow, Izd-vo "Mashinostroyeniye", 1964, 456 p. illus., biblio. Errata slip inserted. 5,200 copies printed. Series note: Tekhnologiya aviadvigatelestroyeniya

TOPIC TAGS: aircraft engine manufacture, turbine blade, engine compressor, quality control, plastics, nuclear propulsion, aircraft fuel supply, combustion chamber

PURPOSE AND COVERAGE: This book is a textbook for students of aviation higher educational institutions and departments. It deals with the engineering processes of fabricating parts and components of aircraft engines. The book considers their design features, the technical specification for fabrication and materials, the engineering processes, methods of executing the basic processes, and quality control. The book will also be useful to engineers and technicians of the aviation industry.

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L 45914-65
ACCESSION NR AM5002547

TABLE OF CONTENTS [abridged]:

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L 07810-67 EWT(l)/EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6017496 SOURCE CODE: UR/0137/66/000/001/I082/I082

59
55
13

AUTHOR: Sulima, A. M.

TITLE: Fatigue of high-temperature and refractory alloys with high-frequency loading at working temperatures

SOURCE: Ref. zh. Metallurgiya, Abs. 11560

REF SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 19, 1965, 355-380

TOPIC TAGS: vibration test, fatigue test, high temperature alloy, refractory alloy

ABSTRACT: Fatigue was studied on two types of high-frequency stands with resonance excitation: electrodynamic and magnetostriction with working frequency ranges of 100-3000 and 5000-10,000 cps respectively. The specimens were fatigue tested under symetric cantilever bending with a constant deformation amplitude. The fatigue tests were done at 20 and 250°C on AK4-1 alloy, 20 and 500°C on VT10, 20, 500 and 550°C on EI961, 20, 800 and 850°C on EI617, 20, 800, 850 and 950°C on EI867, 20 and 900°C on EP109, 20, 800 and 900°C on EI929, 20 and 900°C on EP57, 20, 900 and 1,000°C on ZhS6K, and 20 and 950°C on ZhS6-KP. These alloys showed maximum resistance to fatigue failure in the 100-2000 cps loading frequency range. Fatigue resistance is reduced by a further increase in frequency. EP57, ZhS6KP and ZhS6K refractory alloys show extremely stable fatigue characteristics under high-frequency loading. The shape of the

Card 1/2 UDC: 669.018.45:620.17

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ACC NR: AR6017496 4

specimen has a considerable effect on resistance to fatigue, e. g. EI617 alloy shows the lowest cyclic strength when the cross section of the specimen has a curvilinear shape close to that of a gas turbine vane. Fatigue cracking in all cases is independent of loading frequency on grain surfaces and develops through the grain body, changing direction within the limits of individual grains. V. Ivanova. [Translation of abstract]

SUB CODE: 11

Card 2/2 mc

SULIMA, A.N.

Sterilization by steam in the cooling coil of hermetically closed fermentation vats. Spirt.prom. 20 no.3:39 '54. (MLRA 7:10)
(Sterilization) (Fermentation)

FEDOSEYEV, V.M.; SULIMA, A.V.; SILAYEV, A.[illegible].

S derivatives of thiourea. Part 6: 2,3-Di(isothiuronium bromide)-propanol and its ethers. Zhur.ob.khim. 32 no.10:3432-3439 O '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

(Pseudourea) (Propanol)

SULIMA, D.N.

Characteristics of unripe seeds and their use in the process of changing spring durum wheat into winter wheat. Agrobiologiia no.3:417-424 My-Je '65. (MIRA 18:11)

1. Rostovskiy-na-Donu gosudarstvennyy universitet, kafedra pochvovedeniya i agrokhimii.

SULIMA, G.I. [Sulyma, H.I.], brigadir

In the campaign for over-all mechanization. Mekh. sil' khosp. 10 no.4:6-8 Ap '59. (MIRA 12:6)

1.Traktornaya brigada kolkhoza im. Frunze, Mezhevskiy rayon, Dnepropetrovskoy oblasti.

(Farm mechanization)

SULIMA, G.I. [Sulyma, H.I.], brigadir traktornoy brigady

Making efficient use of machinery in spring work. Mekh.sil'. hosp. 11 no.3:7-8 Mr '60. (MIRA 13:6)

1. Kolkhoz im.Frunze, Mezhevskogo rayona, Dnepropetrovskoy oblasti.
(Agricultural machinery)

VASHCHENKO, V. S., inzh.; LINNIK, G. F., dotsent; NIKULIN, S. Ye., dotsent; SULIMA, G. S., inzh.; KUCHERYAVENKO, I. A., inzh.

Improving stoping operations in the "Gigant" Mine. Izv. vys. ucheb. zav.; gor. zhur. no.10:13-17 '61. (MIRA 15:10)

1. Krivorozhskaya shakhta "Gigant" (for Vashchenko).
2. Krivorozhskiy gornorudnyy institut (for Linnik, Nikulin, Sulima, Kucheryavenko). Rekomendovana kafedroy razrabotki rudnykh mestorozhdeniy poleznykh iskopayemykh Krivorozhskogo gornorudnogo instituta.

(Krivoy Rog Basin—Stoping(Mining))

MALAKHOV, G.M., prof., doktor tekhn.nauk; ZHELTETSKIY, A.Ye.; CHERNENKO, A.R.; VASHCHENKO, V.S.; NIKULIN, S.Ye., kand.tekhn.nauk; LINNIK, G.F., kand.tekhn.nauk; LAVRINENKO, V.F., kand.tekhn.nauk; SULIMA, G.S., gornyy inzh.

Breaking ore in a "compressed" medium in the Dzerzhinskiy Mine was not worthwhile. Gor.zhur. no.8:21-25 Ag '62. (MIRA 15:8)

1. Glavnyy inzh. rudoupravleniya im. Dzerzhinskogo (for Zheltetskiy). 2. Zaveduyushchiy shakhtoy "Gigant" rudoupravleniya im. Dzerzhinskogo (for Chernenko). 3. Glavnyy inzh. shakhty "Gigant" rudoupravleniya im. Dzerzhinskogo (for Vashchenko).
(Krivoy Rog Basin--Mining engineering)

LINNIK, G.P., kand. tekhn. nauk; NIKULIN, S.Ye., kand. tekhn. nauk; SULIMA, G.S., inzh.

Maintaining scraper level workings in conditions of increased rock pressure. Met. i gornorud. prom. no.6:45-48 N-D '62. (MIRA 17:8)

1. Institut avtomatiki Gosplana UkrSSR (for Linnik).
2. Krivorozhskiy gornorudnyy institut (for Nikulin, Sulima).

LINNIK, G.F., kand. tekhn. nauk; NIKULIN, S.Ye., kand. tekhn. nauk; SULIMA, G.S., inzh.; SADOVOY, I.P., inzh.

Certain results of the use of short-delay blasting in the Dzerzhinskii mine. Izv. vys. ucheb. zav.; gor. zhur. 6 no.9: 94 '63. (MIRA 17:1)

1. Institut avtomatiki Gosplana UkrSSR (for Linnik).
2. Krivorozhskiy gornorudnyy institut (for Nikulin, Sulima, Sadovoy). Rekomendovana kafedroy shakhtostroyeniya i provedeniya gornykh vyrabotok Krivorozhskogo gornorudnogo instituta.

VASHCHENKO, V.S., inzh.; SHMALIY, V.Ya., inzh.; NIKULIN, S.Ye., kand. tekhn. nauk; LINNIK, G.F., kand. tekhn. nauk; SULIMA, G.S., inzh.

Improving the operating efficiency at the "Gigant" mine. Met. i gornorud. prom. no.5:52-56 S-O '63. (MIRA 16:11)

1. Shakhta "Gigant", rudnik im. Dzerzhinskogo (for Vashchenko, Shmaliy). 2. Krivorozhskiy gornorudnyy institut (for Nikulin). 3. Institut avtomatiki Gosplana UkrSSR (for Linnik). 4. Krivorozhskiy gornorudnyy tekhnikum (for Sulima).

SULIMA, I.M. [Sulyma, I.M.]; [illegible], D.K.

Obtaining acrolein by means of catalytic oxidation of allyl alcohol. Khim.prom. [Ukr.] no.2:26-28 Apr-Je '65. (MIRA 18:6)

SULIMA, L. L.

BC

B-II-1

PROCESSES AND PROPERTIES INDEX

Application of the Bunte burette to the determination of acetaldehyde in gas mixtures. L. SULIMA (Sintet. Kautschuk, 1935, 4, No. 4, 36—36).—Hg is used in place of H_2O-seals. The reagent is $2N$-NH_2OH,HCl in saturated aq. NaCl. The HCl formed is titrated with NaOH. CH. ABS. (e)

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR/Chemistry - Isotopic Exchange 21 Sep 50

"Delayed Exchange of Hydrogen in Solutions of Ammonia Salts," A. I. Brodskiy, Corr Mem, Acad Sci USSR, L. V. Sulima, Inst Phys Chem imeni L. V. Pisarzhevskiy

PA 174T3

"Zh Ak Nauk SSSR" Vol LXIV, No 3, pp 513-515

Direct exchange of hydrogen of ammonium ion with water is either absent or very slow: Exchange proceeds over free ammonia formed by hydrolysis. Confirms this by detn of rate of exchange in ammonium nitrate, sulfate, and chloride both in presence and absence of acid. Isolated salt at different stages

174T3

USSR/Chemistry - Isotopic Exchange 21 Sep 50
(Contd)

of exchange by freezing out or pptg with dioxane and det content of deuterium. Draws up eq describing kinetics of process.

174T3

SULIMA, L.V.

SULIMA, L.V.; BRODSKIY, A.I.

Rate of hydrogen exchange in dissolved ammonium salts. Ukr.khim.zhur. 17 no.2:165-172 '51. (MLRA 9:9)

1.Institut fizicheskoy khimii AN USSR.
(Hydrogen) (Ammonium salts)

BRODSKIY, A. I.; SULEYA, L. V.

Tautomerism

Tautomerism of hypophosphorous and phosphorous acids.
Dokl. AN SSSR 85, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952. UNCLASSIFIED.

SULIMA, L. V.

261T15

USSR/Chemistry - Phosphorus Compounds, Deuterium

Jun 53

"Hydrogen Exchange and Tautomerism of Hypophosphorous and Phosphorous Acids," A.I. Brodskiy, L.V. Sulima, Inst Phys Chem im L.V. Pisarzhevskiy, Acad Sci Ukr SSR

Ukrain Khim Zhur, Vol 19, No 3, pp 247-254

The study of the exchange in P-H groups of H for the deuterium of heavy water showed that tautomerism is absent in the anion of hypophosphorous acid, in phosphorous acid, and in the anion of phosphorous acid and that it is present in undissociated hypophosphorous

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acid. The rate const of the tautomeric transformation of hypophosphorous acid was detd. Confirmation of the explanation offered earlier for the slow hydrogen exchange in soln was obtained.

SULIN, I. V.

Chemical Abstracts
May 25, 1954
General and Physical
Chemistry

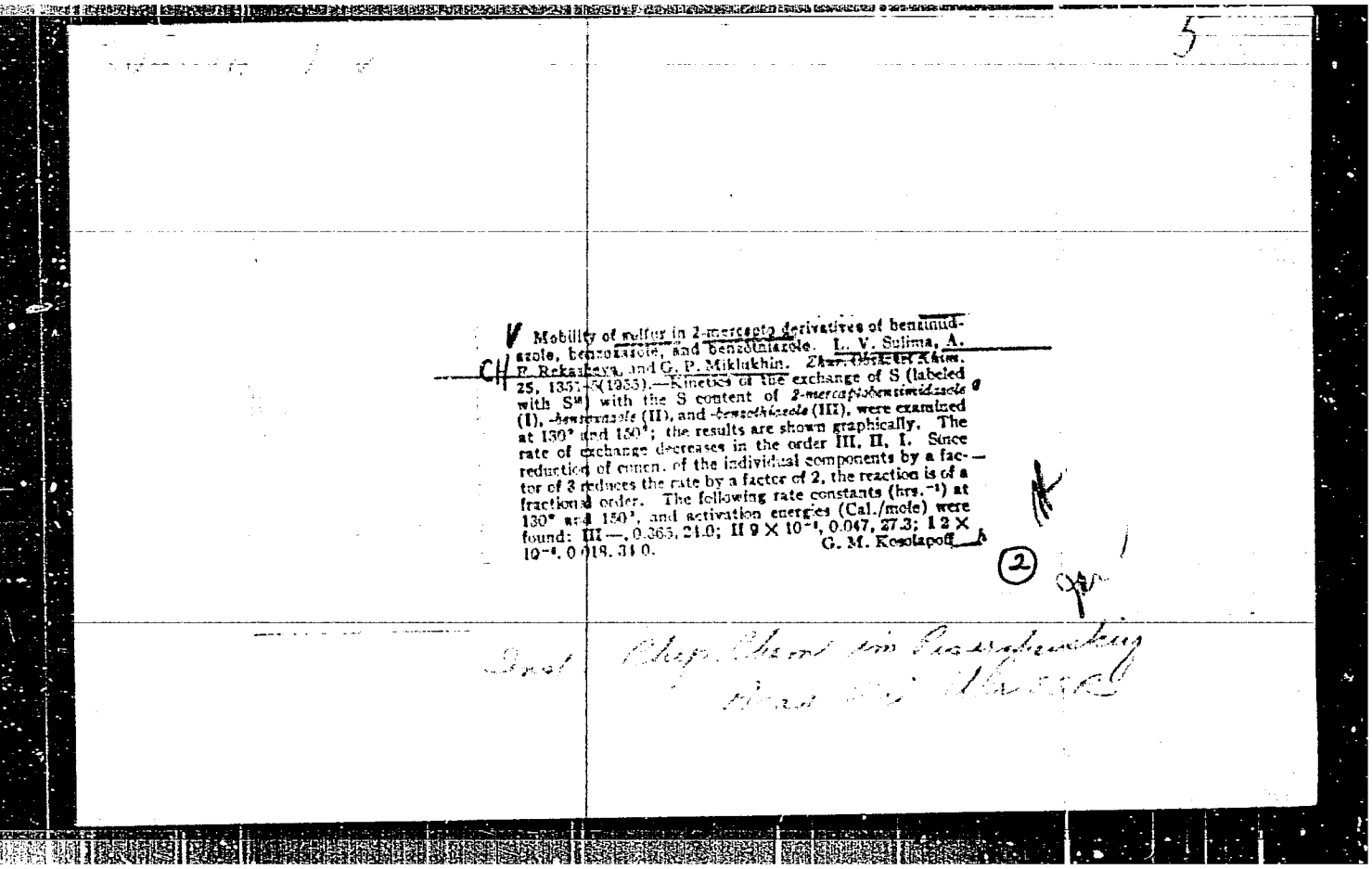
Isotopic exchange of oxygen in solutions of acids of phosphorus. A. I. Brodskii and I. V. Sulina. *Doklady Akad. Nauk S.S.S.R.* 92, 583-92 (1953); cf. *Doklady Akad. Nauk. Ukr. S.S.R.* 1939, No. 5, 39; *C.A.* 37, 1957⁹; 43, 7011c.—The rate of O exchange in 3 acids of P and their salts was examd. The H_2O was enriched with O^{18} (600-800 γ), freed of excess D by prolonged treatment with NH_3, followed by electrolysis during which anodic O_2 combined with normal H_2. Complete D removal was controlled by isotopic analysis and repeated electrolysis. The expts. with the acids were analyzed by flotational method of d. detn. with accuracy of 5γ. The kinetics of O exchange follows the expression $-\ln(1-z) = k(c_0 + c_1)t$, where $z = y/y_\infty$ and c_0 and c_1 are concns. of water and dissolved substance, resp.; y is the excess of heavy O, and y_∞ its content at equil. The H_3PO_2 used in the study contained 2.7% H_2O and 4.8% H_3PO_3; after the exchange the soln. was evapd. in vacuo finally at 50°. At 20° in 3 days no exchange of 0.9% was detd.; the same was found for 63° in 10-40 min. NaH_2PO_2 was studied at 100°, as no exchange took place at room temp. Addn. of acids or bases retards exchange. H_3PO_3 was studied at 63°. Na_2HPO_3 was studied at 100°, at which temp. no exchange took place even in 10 hrs. The following values of rate consts. of the exchange of O and the half-times of exchange were found: H_3PO_2 (40°) over 60×10^{-4} per hr., under 0.2 hr.; H_3PO_2 (63°) 2.8×10^{-4} per hr., 6.5 hrs.; H_3PO_3 (P0°) 9.23×10^{-4} per hr., 70 hrs.; NaH_2PO_2 (100°) 1.3×10^{-4} per hr., 10 hrs.; Na_2HPO_3 no exchange; no exchange with K or Na phosphates (Na_3, Na_2H, NaH_2, K_2H, KH_2). In all acids the exchange is more rapid than in their salts; hypophosphites are much more active than phosphites or phosphates; the rate declines: H_3PO_2, H_3PO_3, H_3PO_4. The reaction probably proceeds by addn. of H_2O to the P—O link, yielding structures like $H_2P(OH)_3$, of an "ortho" form, which then lose H_2O. This addn. is inhibited in the anions (in the salts) in which the neg. charge is distributed among all O atoms instead of being localized and the P atom loses its electrophilic nature. The rate declines as the acids become more basic (OH groups).

G. M. Kosolapoff

SULEM , L. V.

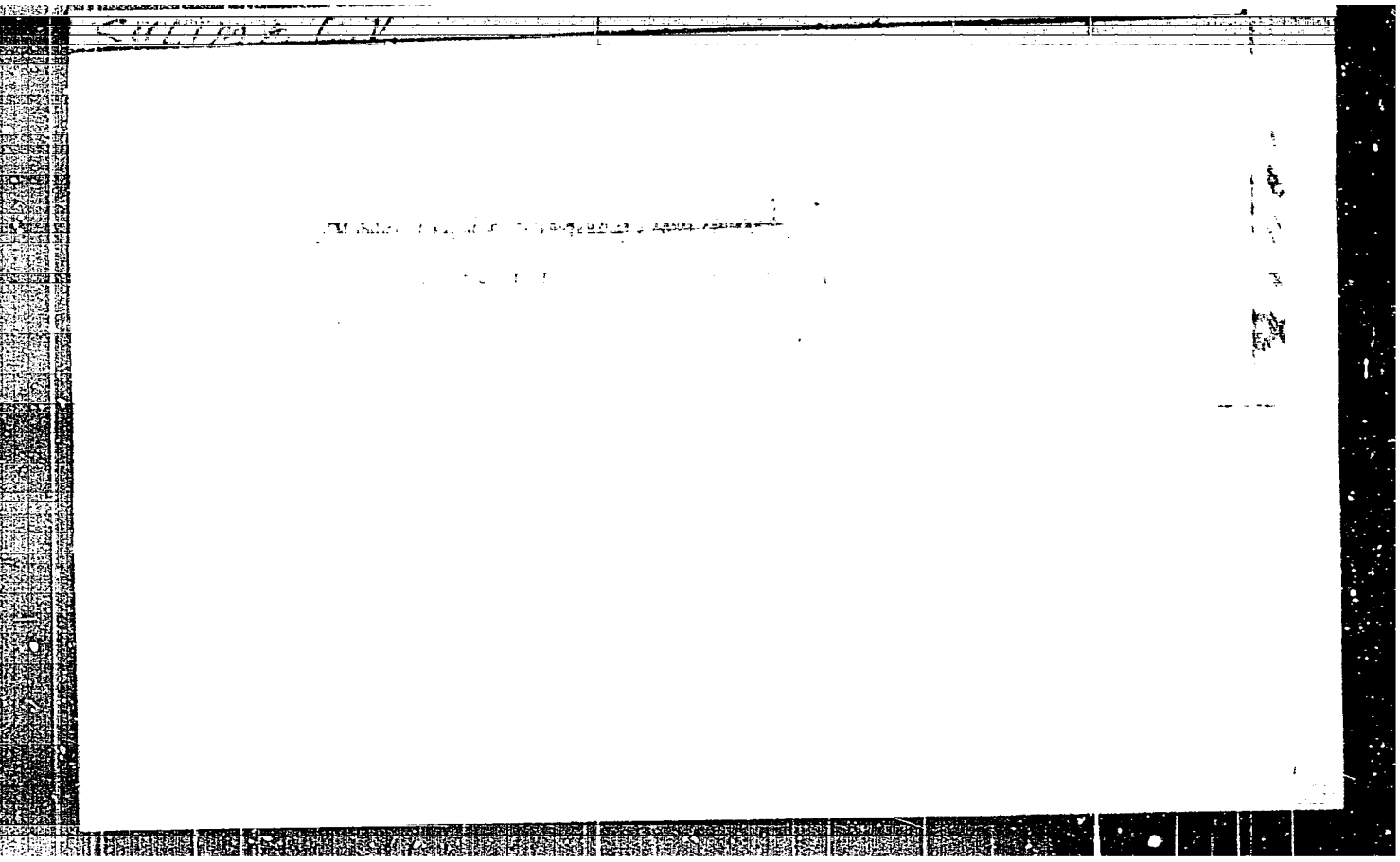
SULEMA, L. V. "Investigation of the Mechanism of Exchange of Hydrogen and Oxygen in Salts of Ammonia and the Phosphorus Acids, and the Tautomerism of the Latter." Acad Sci Ukrainian SSR. Inst of Physical Chemistry imeni L. V. Pisarzhevskiy. Kiev. 1954. (DISSERTATION FOR THE DEGREE OF CANDIDATE IN CHEMICAL SCIENCE.)

So.: Knizhnaya letopis'
No. 27, July 2, 1955.



Mobility of sulfur in 2-mercapto derivatives of benzimidazole, benzoxazole, and benzothiazole. L. V. Sulima, A. P. Rekalova, and G. P. Miklukhin. *Zhur. Obshchei Khim.* 25, 1357-8(1955).—Kinetics of the exchange of S (labeled with S^{35}) with the S content of *2-mercaptobenzimidazole* (I), *-benzoxazole* (II), and *-benzothiazole* (III), were examined at 130° and 150°; the results are shown graphically. The rate of exchange decreases in the order III, II, I. Since reduction of concn. of the individual components by a factor of 3 reduces the rate by a factor of 2, the reaction is of a fractional order. The following rate constants (hrs.$^{-1}$) at 130° and 150°, and activation energies (Cal./mole) were found: III —, 0.365, 21.0; II 9×10^{-4}, 0.047, 27.3; I 2×10^{-4}, 0.018, 31.0.

G. M. Kosolapoff



MIKLUKHIN, G.P. [deceased]; SULIMA, L.V.; MASTRYUKOVA, T.A.; KABACHNIK, M.I.

Mobility of sulfur in thiophosphorus-organic compounds. Trialkythiono-phosphates and dialkylthiophosphates. Dokl.AN SSSR 106 no.5:848-850 F '56. (MLRA 9:7)

1.Chlen-korrespondent AN SSSR (for Kabachnik).2.Institut elementoorganicheskoy soyedineniy Akademii nauk SSSR i Institut fizicheskoy khimii imeni L.V.Pisarzhevskoge Akademii nauk SSSR.
(Thiophosphates) (Sulfur--isotopes)

[redacted], L. L. and SHLIN, L. V., (Inst. of Phys. Chem. im. L. V. Pisarzhevskiy, Acad. Sci. UK. SSR.

"Idotopic Exchange of Oxygen, Nitrogen, and Sulfur in Solutions, and Its Mechanism."
p. 20.

Isotopes and Radiation in Chemistry, Collection of papers of 2nd All-Union Sci. Tech. Conf. on Use of Radioactive and Stable Isotopes and Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 380pp.

This volume published the reports of the Chemistry Section of the 2nd AU Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation in Science and the National Economy, sponsored by Acad Sci USSR and Main Admin for Utilization of Atomic Energy under Council of Ministers USSR Moscow 4-12 Apr 1957.

SOLIMAN, L. V.

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PHASE I BOOK EXPLOITATION SOV/5410

...aya Konferentsiya po mirnomu ispol'zovaniyu atomnoy ...ergii. Tashkent, 1959.

Trudy (Transactions of the Tashkent Conference on the Peaceful ... of Atomic Energy) v. 2. Tashkent, Izd-vo AN UzSSR, 1960. ... p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk Uzbekskoy SSR.

Responsible Ed.: S. V. Starodubtsev, Academician, Academy of Sciences Uzbek SSR. Editorial Board: A. A. Abdullayev, Candidate of Physics and Mathematics; D. N. Abdurasulov, Doctor of Medical Sciences; U. A. Arifov, Academician, Academy of Sciences Uzbek SSR; A. A. Borodulina, Candidate of Biological Sciences; V. N. Ivashev; G. S. Ikramova; A. Ye. Kiv; Ye. ... Ibragimov, Candidate of Physics and Mathematics; A. I. Nikolayev, Candidate of Medical Sciences; D. Mizhanov, Candidate of Chemical Sciences; A. S. Sadykov, Corresponding Member, Academy of Sciences USSR, Academician, Academy of Sciences Uzbek SSR; Yu. N. Talanin,

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Transactions of the Tashkent (Cont.) SOV/5410

Candidate of Physics and Mathematics; Ya. Kh. Turakulov, Doctor of Biological Sciences. Ed.: R. I. Khamidov; Tech. Ed.: A. G. Babakhanova.

PURPOSE: The publication is intended for scientific workers and specialists employed in enterprises where radioactive isotopes and nuclear radiation are used for research in chemical, geological, and technological fields.

COVERAGE: This collection of 133 articles represents the second volume of the Transactions of the Tashkent Conference on the Peaceful Uses of Atomic Energy. The individual articles deal with a wide range of problems in the field of nuclear radiation, including: production and chemical analysis of radioactive isotopes; investigation of the kinetics of chemical reactions by means of isotopes; application of spectral analysis for the manufacturing of radioactive preparations; radioactive methods for determining the content of elements in the rocks; and an analysis of methods for obtaining pure substances. Certain

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instruments used, such as automatic regulators, flowmeters, level gauges, and high-sensitivity gamma-relays, are described. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

RADIOACTIVE ISOTOPES AND NUCLEAR RADIATION IN ENGINEERING AND GEOLOGY

S/081/62/000/001/004/067
B156/B101

AUTHORS: Brodskiy, A. I., Gragerov, I. P., Franchuk, I. F., Sulima, L.V., Kukhtenko, I. I., Lunenok, V. A., Fomenko, A. S., Alexsankin, M. K.

TITLE: Mechanism of oxidation reactions investigated by the isotopic method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 60, abstract 1B439 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii, v. 2. Tashkent, AN UzSSR, 1960, 327-334)

TEXT: A review of work done by the authors on studying the mechanism of certain oxidation reactions using isotopes: the oxidation of organic compounds with chromyl chloride, the mechanism of anthranil regrouping, the process of oxidation of aniline, o-anisidine and p-nitroaniline with Caro acid. The mechanism whereby hydrogen peroxide and certain persulfate-type inorganic peroxide compounds are formed and converted is examined; so also are the kinetics of isotopic exchange in substituted benzoic acids,

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S/081/62/000/001/004/067
B156/B101

Mechanism of oxidation reactions ...

benzaldehydes, alcohols, naphthalenes and nitro compounds with H_2O^{18}.
18 references. [Abstracter's note: Complete translation.]

Card 2/2

SULIMA, L.V.

Catalytic hydroxylation of allyl alcohol by hydrogen peroxide.
Dop. AN URSR no. 12:1611-1613 '60. (MIRA 14:1)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN USSR. Predstavleno akademikom AN USSR A.I. Brodskim.
(Hydroxylation) (Allyl alcohol) (Hydrogen peroxide)

SULIMA, L.V.

Mechanism of the catalytic hydroxylation of allyl alcohol by hydrogen peroxide. Zhur. ob. khim. 31 no.3:891-895 Mr '61. (MIRA 14:3)

1. Institut fizicheskoy khimii AN USSR.
(Allyl alcohol) (Hydroxylation)(Hydrogen peroxide)

SULIMA, L.V.

Hydroxylation of allyl alcohol by hydrogen peroxide in the presence of mercury and its compounds. Zhur. ob. khim. 32 no.1:307-309 Ja '62 (MIRA 15:2)

(Allyl alcohol) (Hydroxylation)

SULIMA, L.V.

Hydroxylation of [illegible] acid and cyclohexane by Caro's acid in H_2O-D_2O solution. Ukr. khim. zhur. 31 no.12[illegible] '65. (MIRA 18:9)

Intermolecular hydroxylation of allyl alcohol to glycerol by hydrogen peroxide in the presence of $CoSO_4$ in $H_2O^{16}-H_2O^{18}$ solution. Theor. i eksp. khim. 1 no.1[illegible] '65. (MIRA 18:9)

1. Institut fizicheskoy i kolloidnoy khimii Ukrainskogo AN Ukr.SSR.

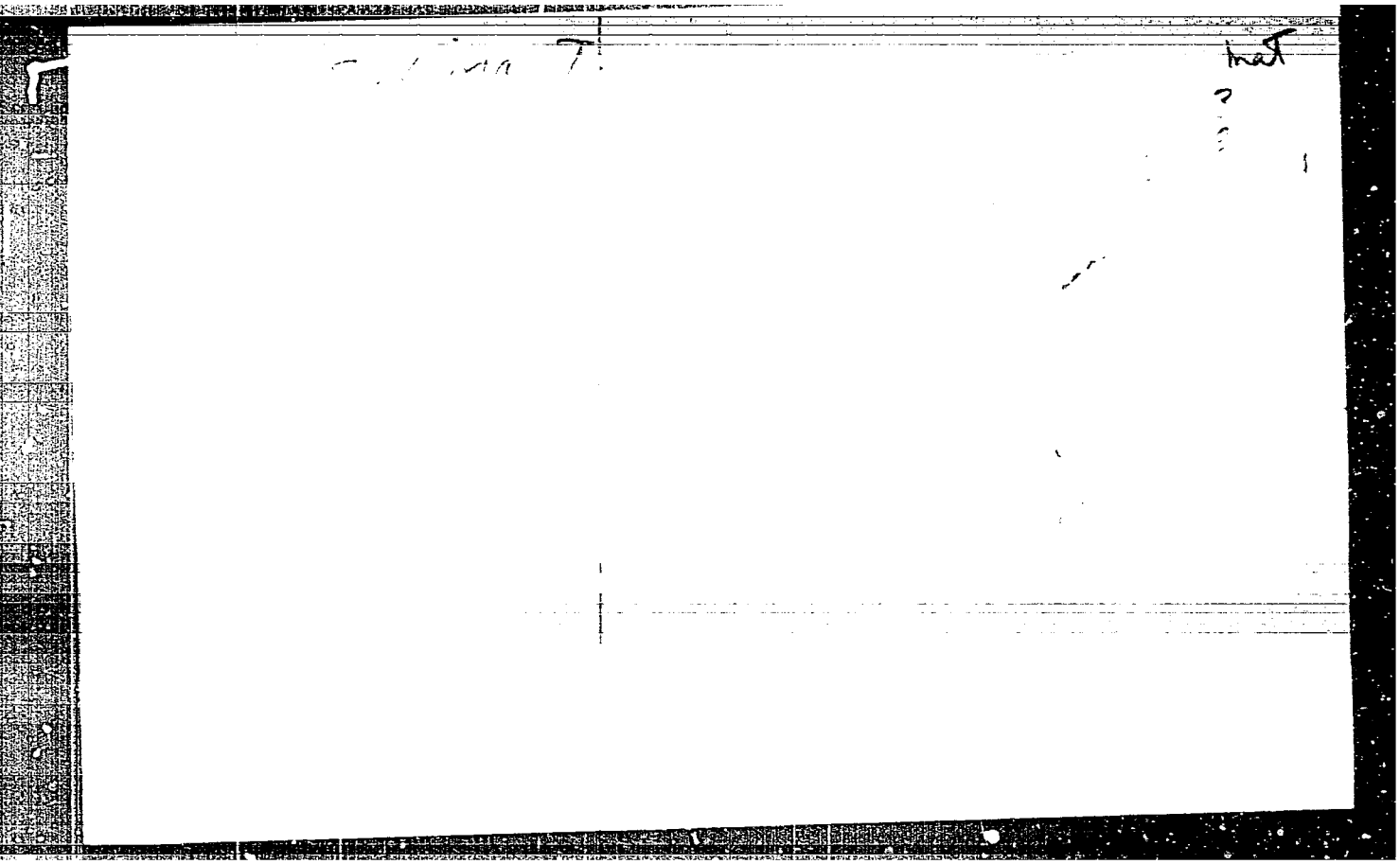
GELLER, B.A.; NEYMARK, I.Ye.; RUBANIK, M.Ya.; GRAGEROV, I.P.; POLYAKOV, M.V.; RUSOV, M.T.; DAIN, B.Ya.; REKASHEVA, A.F.; STRAZHESKO, D.N.; LUNENOK, V.A.; ROYTER, V.A.; SULIMA, L.V.; FOMENKO, A.S.

Aleksandr Il'ich Brodskii, 1895- ; on his seventieth birthday. Zhur. fiz. khim. 39 no.6:1540-1541 Je '65. (MIRA 18:11)

CHUCHINA, M.K., inzh.; SULIMA, N.T., inzh.; LOPATIN, V.F., inzh.; CHERKASOV, V.G., inzh.

Commentary on the article by Engineer E.V.Liul'ko "Regulating the computation and payment of general mine expenses in mining." Shakht.stroi. 5 no.4:28-30 Ap '61. (MIRA 14:5)

1. Trest Makeyevshakhtostroy (for Sulima). 2. Institut Kuzbassgiproshakht (for Lopatin). 3. Ukrainskiy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva (for Cherkasov). (Mining industry and finance) (Liul'ko, E.V.)



38591
S/081/62/000/010/074/085
B166/B144

AUTHORS: Lausch, Adam, Sulima, Tadeusz, Wajda, Helena, Rodziński, Władysław, Matyszkiewicz, Stanisław, Nikodem, Jan, Okrasa, Jerzy

TITLE: A method of producing varnish for impregnating fabric in the production of electrical insulating panels

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 635, abstract 10P239 (Polish Patent 44508, June 7, 1961)

TEXT: The varnish for impregnating fabric to be used for electrical insulating panels is obtained by mixing a solution of epoxy resin in acetone along with an amine curing agent and a solution of phenolic resin, without free phenol, in C_2H_5OH with added urotropine. The special feature of this method is the use of a phenolic resin with the free phenol removed by toluene extraction. Electrical insulating panels made with the aforesaid varnish show high mechanical strength and heat resistance up to 180°C. Example. A solution is prepared with 51.5 parts by weight epoxy

Card 1/2

H.

POLAND/Chemical Technology - Chemical Products and Their Application - Synthetic Polymers. Plastics.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 30775

Author : Sulima, T.
Inst : -
Title : Thermosetting Plastics.

Orig Pub : Przeglad Elektrotechn, 31, No 10-11, 629-632, 1957.

Abstract : See RZhKhim, 1956, 11839.

Card 1/1

SULIMA, Tadeusz, dr inz.

Effect of the time of pressing on the electroinsulating properties of heat hardening molding mixtures. Wiad elektrotechn 34 no.1:14-15 Ja '65.

1. Department of Electric Materials of the Institute of Electrical Engineering, Warsaw.

SULIMA, Tadeusz

Time of molding electroinsulation laminates as determined by electric measurements. Polimery tworz wielk 10 no.2:63-66 F '65.

1. Department of Electric Materials of the Institute of Electrical Engineering, Warsaw. Submitted September 25, 1964.

[redacted], Wanda, dr inż.

Dielectric losses of laminates as a criterion for the determination of the molding time. Przegl elektrotechn 41 no.2:68-69 F '65.

1. Department of Electric Materials of the Institute of Electrical Engineering, Warsaw.

SULIMA, V.T., master tsekha po remontu tochnykh priborov

New portable thermal meter. Elek. i tepl. tiaga 4 no.10:22-23 O '60. (MIRA 13:10)

(Diesel locomotives--Maintenance and repair)

VOL'SKIY, T.G.[Vol's'kyi, .H.] otv. red.; YEMTSOV, V.F. [Evmenov, V.F.], red.; IVANETS', O.M., red.; KIPARENKO, M.M.[Kyparenko, M.M.], red.; KOZAK, Ye.I., red.; MALUSHA, K.V., red.; NOVIKOV, I.N., red.; OVSYANNIKOV, V.B., red.; PLETN'OVA, O.V., red.; SULIMA, Ya.F., red.[Sulyma,IA.F.],red.; FAVOROV,O.M., red.

[Recommendations for the chemicalization of agriculture in Lvov Province] Rekomendatsii po khimizatsii sil'skoho hospodarstva L'vivshchyny. L'viv, Kameniar, 1964. 84 p. (MIRA 17:9)

1. Naukovo-doslidnyy institut zemlerobstva i tvarynnytstva zakhidnykh rayoniv URSR.

SULIMA, Yu.G.

Studying the phenomenon of diasymmetry in corn. Izv. AN Mold. SSR no.6:6-49 '63. (MIRA 17:12)

SULIMA, Yu.G., BUYUKLY, F.I.

Studying the dissymmetry phenomenon in wheat. Izv. AN Mold. SSR no.6:50-68 '63. (MIRA 17:12)

SULIMA SANUJILLO, J.

SULIMA SANUJILLO, J. The mechanical machining of rocks for building blocks.
p. 265. Vol. 11, no. 9, Sept. 1956. MATERIALY BUDOWLANE. Warszawa, Poland.

SOURCE: EAST EUROPEAN ACCESSIONS LIST (EEAL) VOL 6 NO 4 APRIL 1957

SULIMA-SAMUYLLO, A.P., prepodavatel'; KROT-KRIVAL', I.S., prepodavatel';
KOVROVTSEVA, Ye.G., prepodavatel'; KOVALEVA, I.M., prepodavatel';
BUGROVA, O.G., prepodavatel'; LEVENTO, T.Ya., prepodavatel';
PROKHOROV, V.F., red.; ZHAVORONKOV, I.I., red.; KHITROV, P.A.,
tekhn.red.

[German-Russian railroad dictionary] Nemetsko-russkii zheleznodorozhnyi slovar'. Sost.A.P.Sulima-Samuillo i dr. Pod red. V.F.Prokhorova. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 536 p. (MIRA 14:4)

1. Kafedra inostrannykh yazykov Moskovskogo instituta inzhenerov zheleznodorozhnogo transporta (for Sulima-Samuyllo, Krot-Krival', Kovrovtseva, Kovaleva, Bugrova, Levento)
(Railroads--Dictionaries)
(German language--Dictionaries--Russian)

SULIMENKO, M.

Poultry houses in attics of livestock buildings. Sel'. stroi. 15 no.11:20-21 N '60. (MIRA 13:11)

1. Nachal'nik otdela stroitel'stva Khabarovskogo krayevogo upravleniya sel'skogo khozyaystva.
(Khabarovsk Territory--Poultry houses and equipment)

TEMKIN, Boris Semenovich; KITAYGORODSKIY, I.I., doktor tekhn. nauk, prof., retsenzent; NOVIKOVA, A.F., retsenzent; SULIMENKO, M.V., retsenzent; DUKHOVNYY, F.N., red.; SHAPENKOVA, T.A., tekhn.red.

[Technology of glass and glass products] Tekhnologiia stekla i stekloizdelii. Moskva, Rostekhizdat, 1962. 458 p.
(MIRA 16:3)
(Glass)

DENISOV, V.I.; SULIMENKO, P.P.; OLEYNIK, A.I.; OLEYNIK, I.I.

Machine for processing glass edges. Stek.i ker. 19 no.9:31 S '62. (MIRA 15:9)

1. Stekol'nyy zavod "Proletariy".
(Glass factories--Equipment and supplies)

SULIMENKO, P.T.

Improving the quality and expanding the assortment of products made from potato, corn and other grain crops. Khar. prom. no.2:74-75 Ap-Je '65. (MIRA 18:5)

SULIMENKO, P.T.

Utilization of capital assets in the enterprises of the canning and fruit-and-vegetable industry of the economic councils of the Ukraine. Khar. prom. no.4:82-83 O-D '65. (MIRA 18:12)

SULIMENKO, P.T.

Scientific and technical conference of representatives of the canning, dried vegetables and concentrated food industries. Khar.prom. no.4:85 O-D '62. (MIRA 16:1)
(Ukraine--Food research) (Canning and preserving)

ZAVERTAYLO, M.M.; BAZLOV, M.K.; SULIMENKOV, G.P.

Using water for cooling natural gas in low-temperature separation units. Gaz. delo no.9:13-16 '65. (MIRA 18:9)

1. Krasnodarskiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

20587

S/109/61/006/002/019/023
E140/E435

9.3140 (also 1140)

AUTHORS: Bakhrakh, L.E. and Suiimin, A.D.

TITLE: On the Design of Ribbon-Beam Electron Guns

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol.6, No.2, pp.333-336

TEXT: A simple derivation is given for the electrode shape necessary to form a stable ribbon beam from a cathode analogous to a sector of the inner surface of the outer cylinder of a cylindrical diode. The derivation leads to an electrode shape somewhat different from that obtained by J.R.Pierce (Ref.1) or D.E.Radley (Ref.2). Combined analytic and graphical procedures permit determining the conditions necessary for a "waist" to appear in the beam. In one experimental realization, a ribbon beam of 50 mA at an acceleration potential 800 to 1000 V and a current passage factor of 90 to 95% was obtained through an anode opening of 1 x 8 mm. There are 5 figures and 4 references: 1 Soviet and 3 non-Soviet.

SUBMITTED: February 18, 1960

Card 1/1

SULIMIRSKI, L.

Journ. of Inst. of Petroleum.
V. 38 No. 339
Mar. 1952
Miscellaneous Abstracts

548. Geoanalytical researches in petroleum industry. L. Sulimirski et al (collected papers). *Proc. of Main Petroleum Institute* (Polish) Ministry of Mining & Power, 1950. No. 1, pp. 37.—Seven short papers previously read before the [Polish] Petroleum Institute are presented in the form of a brochure. Their titles are "Geoanalytical Researches in Petroleum Industry," "Research into variations of surface tension of drilling mud and comparison with values obtained by Baroid apparatus," "Determination of helium in natural gases," "Barytics apparatus," "Research into radioactivity of rocks in petroleum drillholes," "Construction of cable connecting apparatus investigating radioactivity with the surface," "Interpretation of the results of the first electronic logging of a petroleum drillhole." Papers are illustrated by sketches and followed by discussion. M. S.

ZHELUDKOVA, T.N.; ZAVYALOVSKIY, V.P.; SULIMO-SAMUYLO, Z.K.

Effect on the organism of a prolonged exposure to a gaseous medium with increased carbon dioxide content. Funk. org. v usl. izm. gaz. sredy 3:187-192 '64. (MIRA 17:11)

GERTS, Genrikh [Hertz, Heinrich Rudolf]; GRIGOR'YAN, A.T.; POLAK, L.S.; KOTOV, V.F. [translator]; SULIMO-SAMUYLO, A.V. [translator]; ARTOBOLEVSKIY, I.I., red.; GUROV, K.P., red.izd-va; NOVICHKOVA, N.D., tekhn.red.

[Principles of mechanics, presented in a new form] Printsipy mekhaniki, izlozhennye v novoi sviazi. Izd.podgotovili A.T. Grigor'ian, L.S.Polak. Obshchaia red. I.I.Artobolevskogo. [Translated from the German]. Moskva, Izd-vo Akad.nauk SSSR, 1959. 386 p. (MIRA 12:4)

(Mechanics, Analytic)

L 42182-65 EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(1)/FS(v)-3 Pb-4/
Pe-5 AFFTC/ AFMDC/AMD/APGC DD

ACCESSION NR: AT5010615 UR/3147/64/003/000/0187/0192

47
B+1

AUTHOR: Zheludkova, T. N.; Zagryadskiy, V. P.; Sulimo-Samuyllo, Z. K.

TITLE: Effect of a prolonged stay in a gas medium with an increased CO_2 content on the organism

SOURCE: AN SSSR. Institut evolyutsionnoy fiziologii. Funktsii organizma v usloviyakh izmenennoy gazovoy sredy, v. 3, 1964, 187-192

TOPIC TAGS: carbon dioxide effect, prolonged exposure, increased oxygen pressure, respiration, biological effect, respiration, EKG, EEG, body temperature, central nervous system

ABSTRACT: Experiments were performed on rabbits in a pressure chamber to [illegible] atmospheres containing 3—5% carbon dioxide, with a normal oxygen content or with an oxygen content increased to 40%. A [illegible] ventilating device was attached to the chamber to prevent the car[illegible] above 5%. The frequency and amplitude of [illegible] were meas[illegible]. In addition, analysis of the blood was performed. The rabbits were kept in a 3—5% carbon dioxide atmosphere for periods of 6 and 12 hr.

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L 42182-65

ACCESSION NR: AT5010615

It was found that the respiration, cardiac activity, and thermoregu-

[illegible] the animals are quickly

[illegible] 5—2 hr.

[illegible] the rats were sub-

[illegible] is reduced to

[illegible] and thermo-

[illegible] with a normal oxygen

[illegible] orig. art. has 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 000 SUB CODE: LS, PH

NO REF SOV: 008 OTHER: 003 ATD PRESS: 3240-F

Card 2/2

AP6036565 SOURCE CODE: UR/0000/66/000/000/0175/0175

24

AUTHOR: Zagryadskiy, V. P.; Sidorov, O. U.; Sulimo-Samuyilo, Z. K.

ORG: none

TITLE: Effect of an altered gas medium on the development and course of decompression sickness [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 175

TOPIC TAGS: hypercapnia, decompression sickness, aeroembolism

ABSTRACT: The effect of hypercapnia on the incidence and course of decompression disorders was studied in acute and chronic experiments on dogs and rats.

Animals exposed to atmospheres containing 5%, 7%, and 9% CO_2 were subjected to decompression from 760 mm Hg to 198 mm Hg in 2.5 to 3 min, (with pO_2 maintained at 143 mm Hg). A special double cannula captured the bubbles formed in the dogs' blood. The intensity and rate of bubble formation was compared with that in air-breathing controls subjected to similar pressure drops.

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L 05815-67

ACC NR: AP6033918 (N) SOURCE CODE: UR/0177/66/000/010/0058/0061

22
13

AUTHOR: Zagryadskiy, V. P. (Lieutenant colonel, Medical corps; Candidate of medical sciences); Sidorov, O. Yu. (Lieutenant colonel, Medical corps; Candidate of medical sciences); Sulimo-Samuyllo, Z. K. (Candidate of biological sciences)

ORG: none

22

TITLE: Changes in human organic functions and working capacity depending on rate of increase of carbonic acid content in a hermetically sealed room

SOURCE: Voyenno-meditsinskiy zhurnal, no. 10, 1966, 58-61

TOPIC TAGS: medical research, medical experiment, carbonic acid

ABSTRACT: An investigation was made of human organic functions and working capacity in relation to prolonged (several hours) increase of carbonic acid concentration in hermetically sealed rooms. A group of young men unfit for military service were the subjects of 110 investigations. It was shown that the lower the rate of increase of carbonic acid concentration in the inhaled air of a hermetically-sealed room, the more gradual, complete, and perfect the action of the compensatory mechanisms in the human body. It was concluded that under conditions of relative

Card 1/2 UDC: 612.234:62.213.4

tranquility (hypodynamy) and moderate mental activity, the human organism can gradually compensate (in 2—5 hr) for the adverse effect of carbonic acid concentration as high as 5.5—6%, and can maintain satisfactory working ability. Elimination of hypoxy by increasing oxygen pressure to 21% improved working ability considerably. A supply of bottle oxygen must therefore be reserved in hermetically sealed rooms in case the air-changing system fails. Human reserves decrease steadily as the carbonic acid content in hermetically sealed rooms increases. Any additional physical load, or the simultaneous action of factors such as high temperature, noxious gases, etc., can impede the operation of the compensatory mechanism and accelerate the deterioration of the organism sharply. Under such conditions, permissible concentrations of carbonic acid in hermetically sealed rooms must be smaller. Further studies of this problem are suggested. Orig. art. has: 3 figures.

SUB CODE: 06,05/ SUBM DATE: none/

ACC NR. AP6021503 SOURCE CODE: UR/0402/66/000/003/0371/0371

AUTHOR: Sklyanskaya, Ye. I.; Peterson, O. P.; Sulimov, A. A.

ORG: none

TITLE: Permeability of animal respiratory systems of influenza virus after oral or subcutaneous infection

SOURCE: Voprosy virusologii, no. 3, 1966, 371

TOPIC TAGS: virology, medical experiment, respiratory system, virus, influenza virus, VIRUS DISEASE

ABSTRACT:
White mice were given doses of type-A influenza virus orally or subcutaneously. Specific antibodies labeled with radioactive iodine were used to determine the site of virus in the body. After 48 hours, the viruses were located mainly in the trachea of rats and the lungs of mice. This method is more sensitive than standard methods which are reliable only when intranasal infection is involved. [W.A. 50; CBE No. 10]

SUB CODE: 06/ SUBM DATE: none/

Card 1/1

BELYAYEV, A.F. (Moskva); KOROTKOV, A.I. (Moskva); SULIMOV, A.A. (Moskva)

Effect of pressure on disturbances of the combustion stability of porous explosives. PMTF no.5:117-120 S-O '63. (MIRA 16:11)

1. Institut khimicheskoy fiziki AN SSSR.

BELYAYEV, A.F.; KOROTKOV, A.I.; PARFENOV, A.K.; SULIMOV, A.A.

Burning velocity of some explosives and mixtures at considerably increased pressures. Zhur.fiz.khim. 37 no.1:150-156 Ja '63. (MIRA 17:3)

1. Institut khimicheskoy fiziki AN SSSR.

ACCESSION NR: AP4019516 S/0076/64/038/002/0331/0333

AUTHORS: Sulimov, A.A. (Moscow); Korotkov, A.I. (Moscow)

TITLE: Effect of high temperature gaseous phase on the combustion rate of nitroglycerine powder

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 2, 1964, 331-333

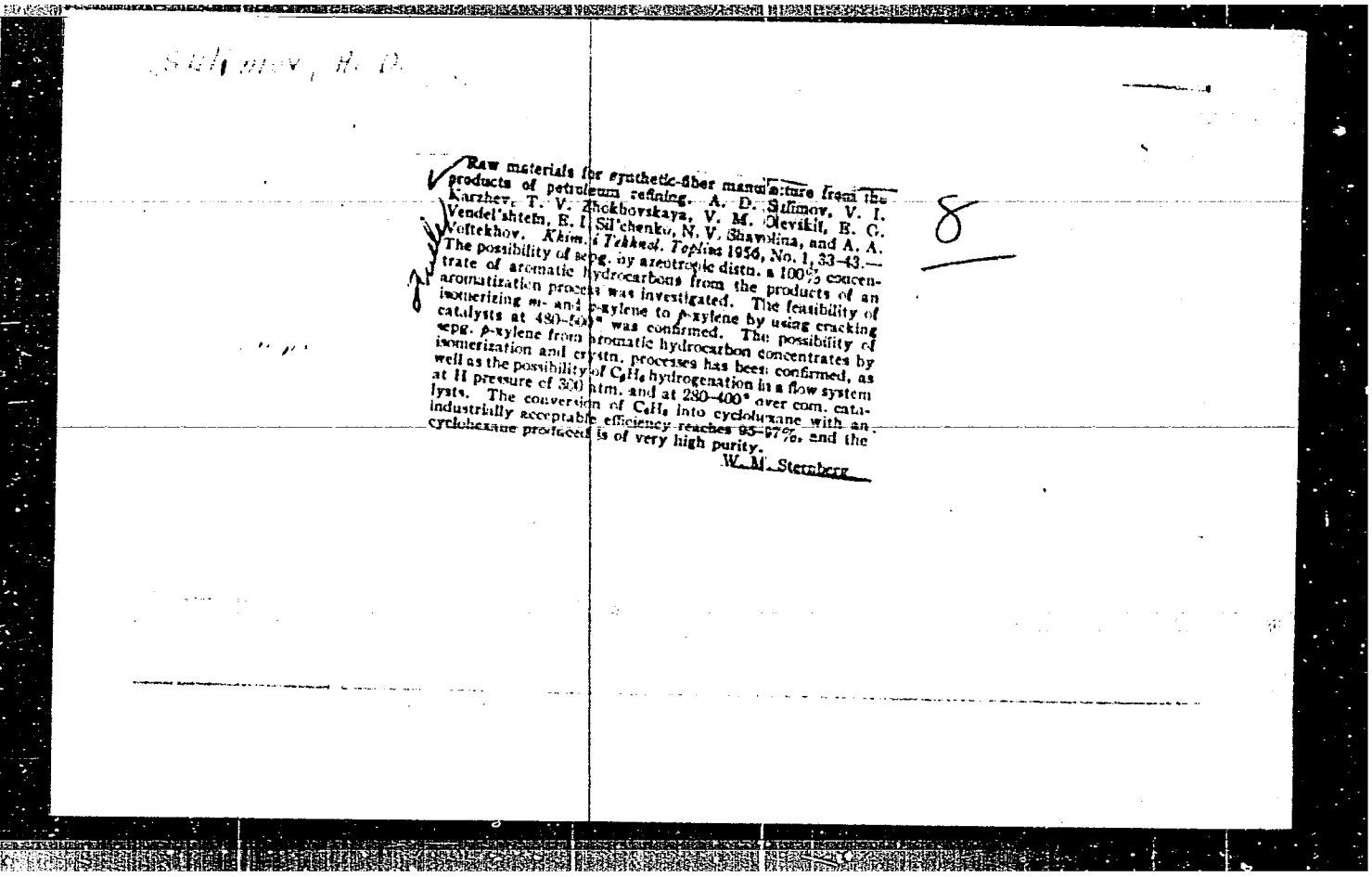
TOPIC TAGS: nitroglycerine powder, powder combustion rate, nitroglycerine, high temperature gaseous phase, pyroxylin

ABSTRACT: The question of how the gaseous phase of burning powder influences the combustion rate is yet unclear. Therefore, the authors undertook tests, burning two thin rectangular plates of nitroglycerine powder or of pyroxylin separated by a gap of 1 x 10 mm and sandwiched between two plexiglass plates. The two plates were placed in a bomb with nitrogen and ignited with black powder. Burning was recorded on a movie film. It was found that when the gap was small (its width less than twice the distance from the surface to the maximum temperature zone) there was a decreasing rate of burning as compared to the normal rate which is explained by the

Card 1/2

GULIMOV, Andrey Dmitriyevich; OKOCHKO, D.I., doktor tekhn. nauk, prof., red.; YENISHERLOVA, O.M., ved. red.

[Catalytic reforming of gasolines] Kataliticheskii riforming benzinov. Moskva, Izd-vo "Khimiia," 1964. 205 p. (MIRA 17:7)



Sulimov, A. D.

Raw materials for synthetic-fiber manufacture from the products of petroleum refining. A. D. Sulimov, V. I. Kurzhev, T. V. Zhokhovskaya, V. M. Olevskii, B. G. Vendel'shtein, E. I. Sil'chenko, N. V. Shavolina, and A. A. Voitekhov. *Khim. i Tekhnol. Topliv* 1956, No. 1, 33–43.—The possibility of sepg. by azeotropic distn. a 100% concentrate of aromatic hydrocarbons from the products of an aromatization process was investigated. The feasibility of isomerizing *m*- and *o*-xylene to *p*-xylene by using cracking catalysts at 480–500° was confirmed. The possibility of sepg. *p*-xylene from aromatic hydrocarbon concentrates by isomerization and crystn. processes has been confirmed, as well as the possibility of C_6H_6 hydrogenation in a flow system at H pressure of 300 atm. and at 280–400° over com. catalysts. The conversion of C_6H_6 into cyclohexane with an industrially acceptable efficiency reaches 95–97%, and the cyclohexane produced is of very high purity.

W. M. Sternberg

SULIMOV, A.D.; LOBEYEV, M.V.; KOZHINA, I.N.; AL'TSHULER, A.Ye.; GUTMAN, A.B.; SATYUGOV, V.M.

Hydrofining of distillate fractions from Eastern petroleums without introducing hydrogen from an external source. Khim.i tekh.topl.no.9: 1-11 S '56. (MLRA 9:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut Neftyanoy promyshlennosti, Novokuybyshevskiy neftepererabatyvayushchiy zavod.
(Petroleum--Refining)

SULIMOV, A. D.

The production of burner oil from high-sulfur distillates by hydrogenation without outside hydrogen. M. V. Lebedev, A. D. Sulimov, and A. V. Agafonov. *Neft. Khoz.* 24, No. 1, 58-61(1956).—The results of autohydrogenation of distillates contg. 0.56% S show that about 98% desulfurization is obtained at a H pressure of ≥9 atm. Expts. were made with an Al_2O_3-Co-Mo catalyst at 370-400° and 20 atm. total pressure. After 600 hrs. of operation the temp. had to be raised to 410°. The total coke deposited on the catalyst was 7.7%; the recycling gas contained 60-75% by vol. of H and 0.5-1.5 vol. % of H_2S. The excess gas was [illegible]. The distillate had to be [illegible] because of the presence of low-boiling hydrocarbons. The product contained 0.009% S. W. M. S.

Sulimov, Andrey Dmitriyevich

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PHASE I BOOK EXPLOITATION

Blagovidov, Igor' Fedorovich, Sulimov, Andrey Dmitriyevich

Sovremennyye metody polucheniya topliv iz nefti; v pomoshch' lektoru (Modern Methods of Obtaining Fuel from Petroleum; Guide for the Lecturer) Moscow, Gostoptekhizdat, 1957. 42 p. (Novaya tekhnika neftyanoy promyshlennosti) 2,000 copies printed.

SPONSORING AGENCY: Nauchno-tekhnicheskoye obshchestvo neftyanoy promyshlennosti.

Ed.: Lozbyakova, Ye. S.; Tech. Ed.: Mukhina, E. A.

PURPOSE: This booklet is intended for the use of lecturers in modern technology and for engineers and specialists in all branches of the petroleum and chemical industries and in related enterprises.

COVERAGE: The authors describe present day methods of obtaining fuel from petroleum. They discuss hydrodesulfurization processes -- hydrofining and automated hydrofining; catalytic reforming processes;

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AVAILABLE: Library of Congress

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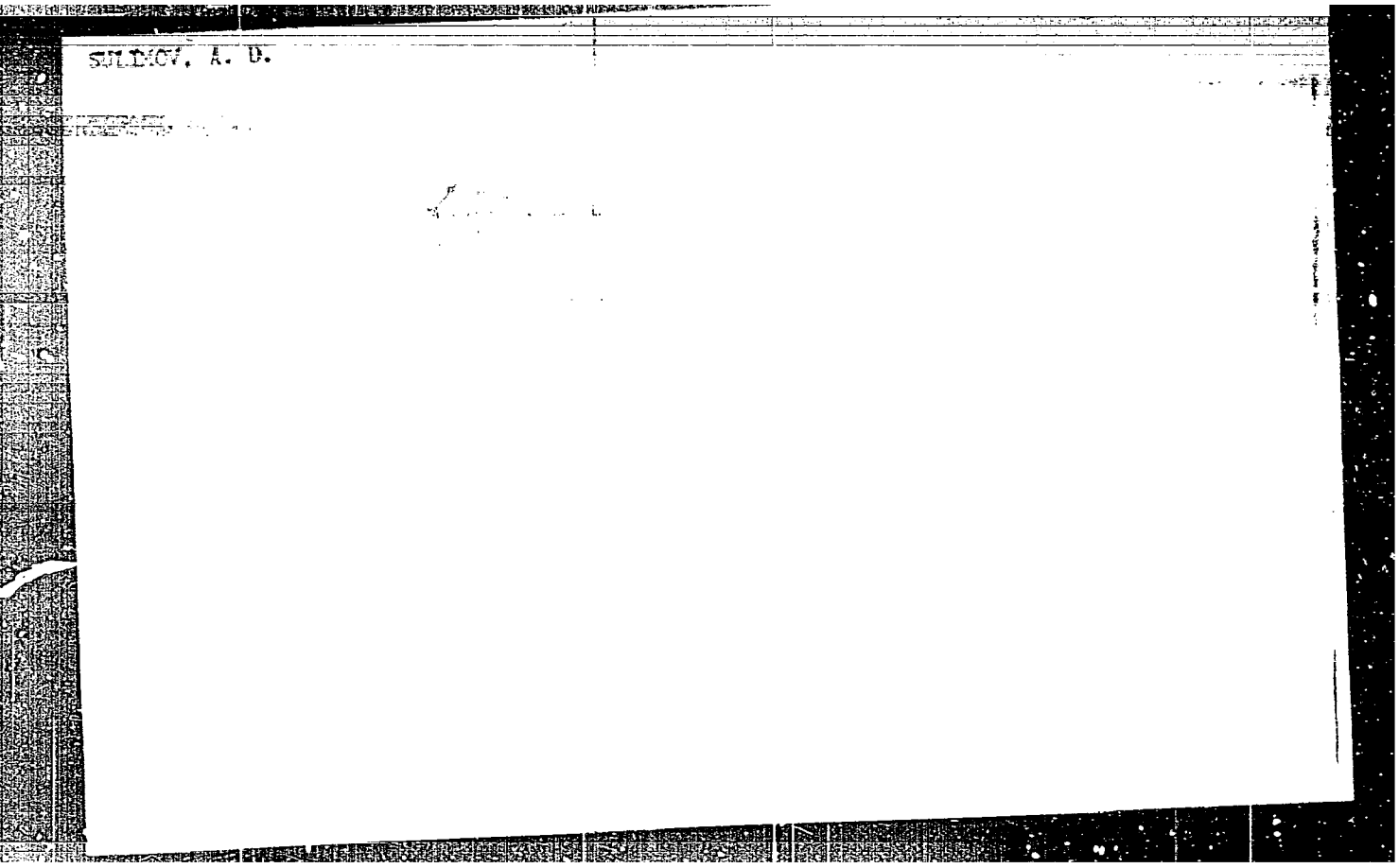
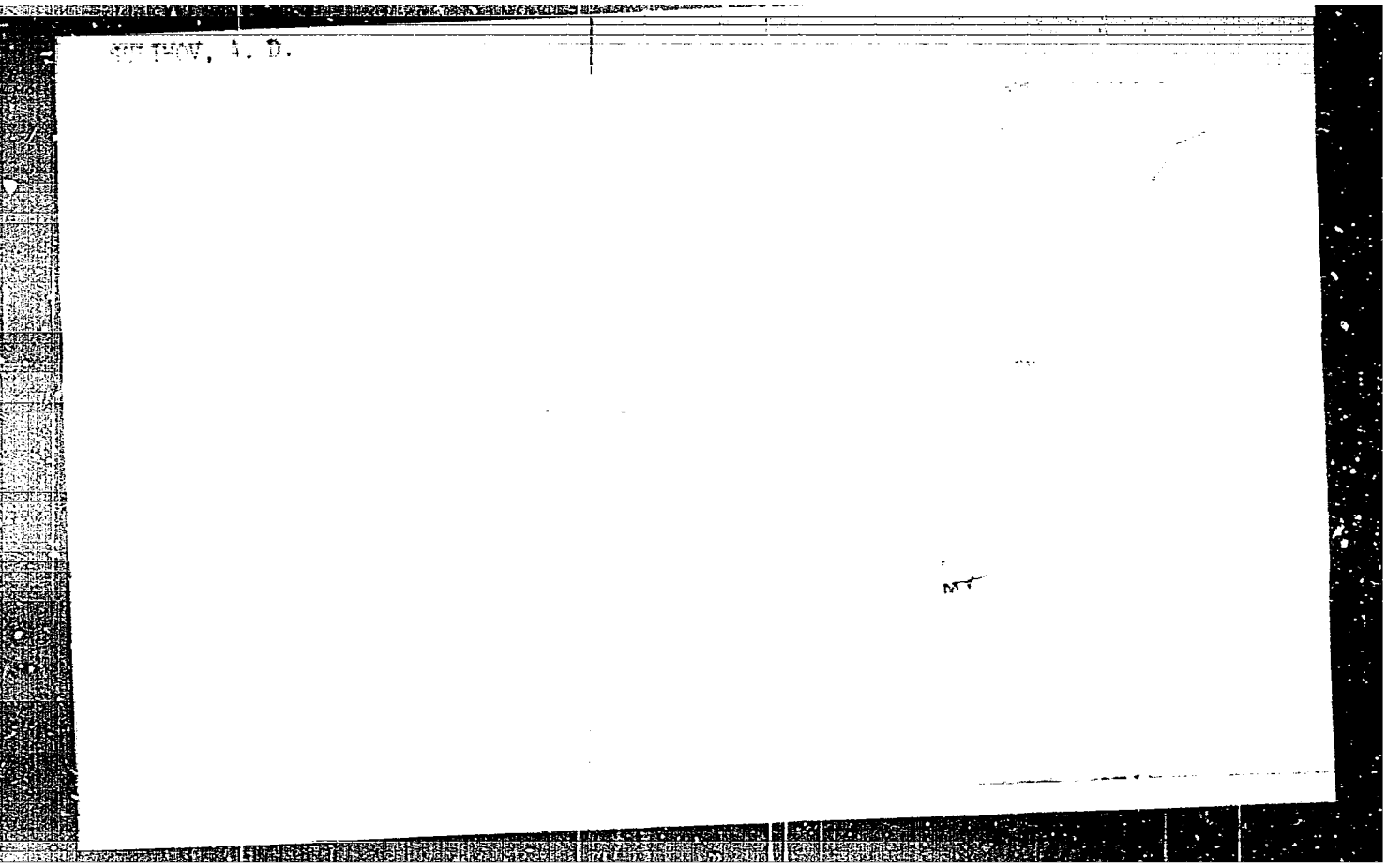
May 26,1958





SULIMOV, A.D.

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Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sera-organicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; materialy II nauchnoy sessii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. [illegible] p. 1,500 copies printed.

Ed.: Sudarkina, E.I.; Editorial Board: Ayvazov, B.V., Mashkina, A.V., Obolentsev, R.D. (Resp. Ed.), Rozhdestvenskiy, V.P., and Shamin, L.L.; Tech. Ed.: Rakhimov, R. Kh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1955; and according to a coordinated research project outlined in 1956 by the sponsoring agency (Bashkir Branch, AS USSR).

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Sulimov, A.D., M.V. Lobeyev, I.N. Koshkina, A.Ye.Al'tshuler, A.B. Gutman, and V.N. Belyayev, Hydrogen Purification of Distilled Fractions of Eastern Petroleum Without the Introduction of Hydrogen From Without 135

A process of "automatic hydrogen purification" (avtogidroochistka) is described which consists in the use of hydrogen separated during the dehydrogenation of naphthene hydrocarbons, as proposed by F.W.B. Porter (Refs 1, 2). Desulfurization of kerosene distillates with initial sulfur content up to 0.8 percent was 90-95 percent after boiling at temperatures ranging from 180 to 300°C for 1000 hours; whereas, desulfurization of gas oil fractions of ~1 percent sulfur content was 60-80 percent after 800 hours at 380-390°C.

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SOV/65-58-12-7/16

AUTHORS: Sulimov, A. D; Lobeyev, M. V; Kozhina, I. N; Piguzova, L. I, and Papko, T. S.

TITLE: The Effect of the Chemical Composition of an Aluminium-Cobalt-Molybdenum Catalyst on its Activity During Hydropurification and Auto-Hydropurification Processes (Vliyaniye khimicheskogo sostava alyumokobal'tmolibdenovogo katalizatora na yego aktivnost' v protsessakh gidroochistki i avtogidroochistki)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 12, pp 32 - 36 (USSR)

ABSTRACT: Hydrogenation-desulphurisation over oxide catalysts at 10 - 70 atms pressure of hydrogen, and temperatures of 360 - 420°C is the most effective method for purifying petroleum products. The authors investigated the desulphurisation and dehydrogenation activity of aluminium-cobalt-molybdenum catalyst and defined its optimum chemical composition. Diesel fuel from Romashkinsk petroleum was used in these tests. The composition of the diesel fuel is tabulated. Samples of the catalysts were prepared according to a process similar to that used in industry. Wet aluminium oxide was suspended in aqueous solutions of ammonium molybdate and cobalt

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nitrate. The suspension was filtered on a vacuum filter until the moisture content equalled 70% and then pressed. The 4 x 4 mm tablets were dried first on air, then at 120 - 150°C, and finally at 650°C for 8 hours. A series of catalyst samples containing 20% of CoO and MoO_3, but with a different ratio of CoO:MoO_3 were prepared. Characteristics of these samples are given in Table 1. Most satisfactory results were obtained when the catalyst contained 1.9% CoO and 18.1% MoO_3 which corresponds to a molar ratio CoO:MoO_3 equal to 1:5. Other samples had the same molar ratio, but the total content of CoO and MoO_3 varied between 5 and 30%. After thermal treatment the catalyst was sulphonated during the hydropurification of the kerosine fraction between 120 and 240°C containing 0.6% sulphur; this process was carried out at 380°C, a pressure of 20 atms and a volume rate of the raw material supplied of 0.5 hour^{-1}. The catalyst was sulphonated for 24 hours. The same catalyst was tested for its dehydrogenation acti-

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vity during auto-hydropurification. The initial concentration of hydrogen in the circulating gas equalled 60%. Details on the concentration of hydrogen, temperature, initial pressure etc. are given. The constant pressure and concentration of hydrogen in the circulating gas were determined after 40 - 50 hours. Tables 2 and 3 give data on the desulphurisation and dehydrogenation activity of the catalyst. At constant partial pressure of hydrogen, catalysts containing 1.9 - 8.9% CoO and 18.1 - 10.7% MoO_3 have similar activity after desulphurisation. Catalysts containing more than 10% cobalt oxide and less than 10% of molybdenum trioxide were much less effective during desulphurisation. The dehydrogenation activity of the catalyst increases on increasing its molybdenum-trioxide content. Aluminium-molybdenum catalysts were most satisfactory, and aluminium-cobalt catalysts showed less activity. The authors recommend

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as most suitable catalysts those containing 1.4 - 3% CoO and 13 - 17% MoO_3. There are 3 Tables and 7 References: 4 English, 1 German and 2 Soviet.

ASSOCIATION: VNII NP

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Sulimov, Andrey Dmitreyevich

Vydeleniye aromaticheskikh uglevodorodov iz neftyanogo syr'ya (Extraction of Aromatic Hydrocarbons From Crude Petroleum) Moscow, Gostoptekhizdat, 1959. 61 p. (Series: Novaya tekhnika neftyanoy promyshlennosti) Errata slip inserted. 3,150 copies printed.

Executive Ed.: O. M. Yenisherlova; Tech. Ed.: I. G. Fedotova.

PURPOSE: This booklet is intended for engineers and technicians in refineries and in petroleum and chemical plants. It may also be used by scientific research organizations, laboratories and design institutions associated with the petroleum refining and chemical industries.

COVERAGE: The booklet is devoted to the study and application of new methods of extracting aromatic hydrocarbons from petroleum products by means of azeotropic distillation, extractive

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distillation, adsorption and low temperature crystallization. Among these aromatic hydrocarbons benzene, toluene and xylene are widely used in the growing production of synthetic materials. In the opinion of the author, the catalytic extraction of benzene, toluene and xylene has substantially raised the importance of the petroleum refining industry. The author points out that important contributions have been made in this field by Soviet scientists N. D. Zelenskiy, B. L. Moldavskiy, G. D. Kamusher, A. F. Plate, V. I. Karzhev, M. G. Sever'yanov, and A. I. Siova. Characteristics of aromatic hydrocarbons, which meet GOST (USSR) requirements are compared with those specified by the ASTM (USA). Experimental results of extracting aromatic hydrocarbons by different pyrolysis methods are shown in numerous tables and are illustrated by graphs. In addition, the author shows flow schemes of the Soviet method of extracting toluene, benzene and xylene distillates, and analyzes procedures for purifying these products and rendering them suitable for marketing. The selection of extraction methods, which under certain conditions can ensure an economical production of above mentioned aromatics,

is also discussed and some useful suggestions offered.

TABLE OF CONTENTS:

S/081/61/000/023/047/061
B138/B101

AUTHORS: Sulimov, A. D., Zhokhovskaya, T. V., Olevskiy, V. M.

TITLE: Production of p-xylene from petroleum crude

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1961, 449, abstract 23M78 (Tr. Vses. soveshchaniya po khim. pererabotke neft. uglevodorodov v poluprodukty dlya sinteza volokon i plast. mass, Baku, AN AzerbSSR, 1960, 87 - 96)

TEXT: The article presents the results of laboratory and production trials of a method of obtaining p-xylene (I) from the 115 - 140°C fraction of Romashki petroleum, using the following scheme: aromatization of the fraction over an alumino-molybdenum catalyst, precise rectification of the aromatized product (29% aromatic hydrocarbons), azeotropic distillation of the 120 - 145°C fraction with CH_3OH with precise rectification (aromatic hydrocarbons ~75%), to produce a 100% mixture of C_8 aromatic hydrocarbons; repeated combined process of low-temperature crystallization of I from the mixture and isomerization of the rest with transformation of the m- and

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AUTHORS: Sulimov, A. D., Lobeyev, M. V., Kozhina, I. N.

TITLE: Hydrogenetive refining of distillate fractions from eastern petroleums without introduction of hydrogen from outside

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 19. 1961, 421, abstract 19M156 (Sb. "Khimiya sera- i azotorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh". Ufa, v. 3, 1960, 365 - 376)

TEXT: The authors examined the autohydrogenetive refining of distillate fractions from eastern petroleums with the use of an aluminum-cobalt-molybdenum catalyst (KT). It was found that KT with a total content of CoO and MoO_3 ranging from 15 to 30% by weight differ only little as to their desulfurization activity. A catalyst with a CoO and MoO_3 content of 15 - 20% was found to have the maximum dehydrogenating activity. KT with a CoO content of 1.4 - 3.0% and a MoO_3 content of 13 - 17% are suited best for achieving autohydrogenetive refining. After examinations in laboratory

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Hydrogenetive refining of...

plants, the process was carried out on an industrial scale in a plant with an output of 450 m^3/24 hr (data for different kinds of raw material are given). It was shown that the degree of desulfurization in auto-hydrogenetive refining of gasoline-kerosene distillates with an S content of up to 0.8% by weight, which evaporate at 240 - 300°C, is 90 - 95% at an operating time of 800 - 1000 hr. The degree of desulfurization of diesel fractions boiling at 200 - 350°C is 50 - 80% at an operating time of 200 hr. [Abstracter's note: Complete translation.]

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BOYEV, S. N.; SULIMOV, A. D.

New lung nematode Protostrongylus moschi sp. nov. from a musk deer. Trudy Inst. zool. AN Kazakh. SSR 16:42-45 '62.
(MIRA 15:10)

(TUVA A.S.S.R.—Nematoda)
(TUVA A.S.S.R.—Parasites—Musk deer)